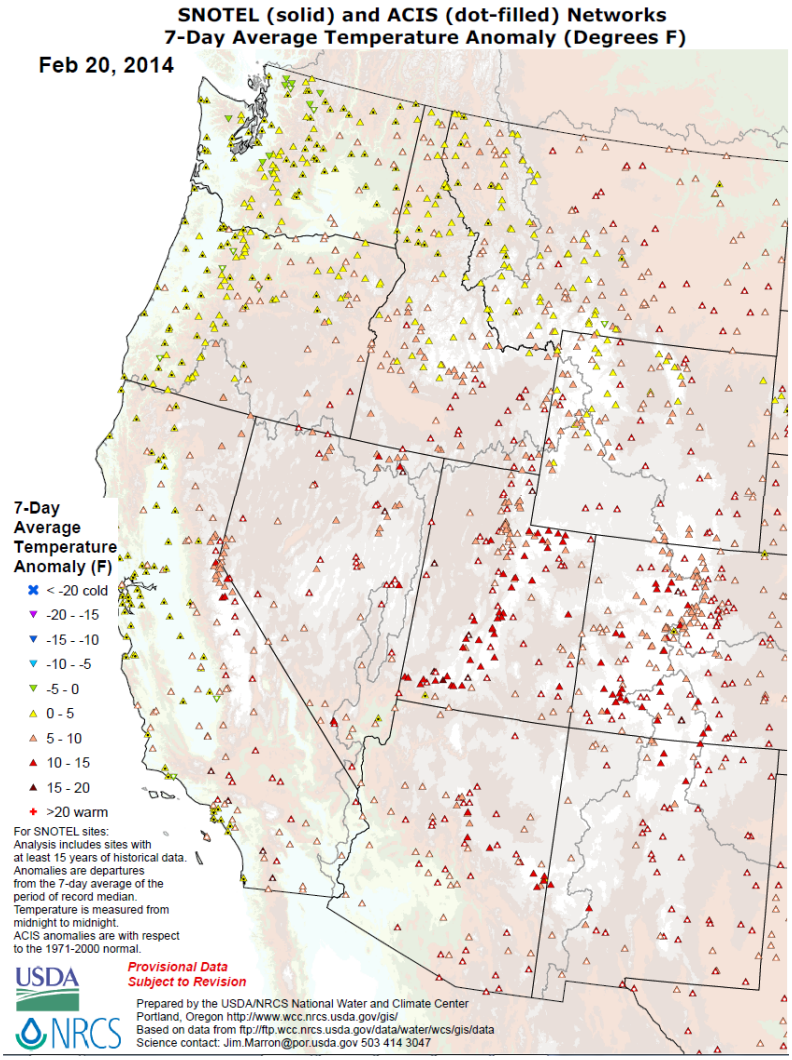
United States Department of Agriculture

Natural Resources Conservation Service
P.O. Box 2890
Washington, D.C. 20013

Weekly Snowpack / Drought Monitor Update

February 20, 2014

Temperature

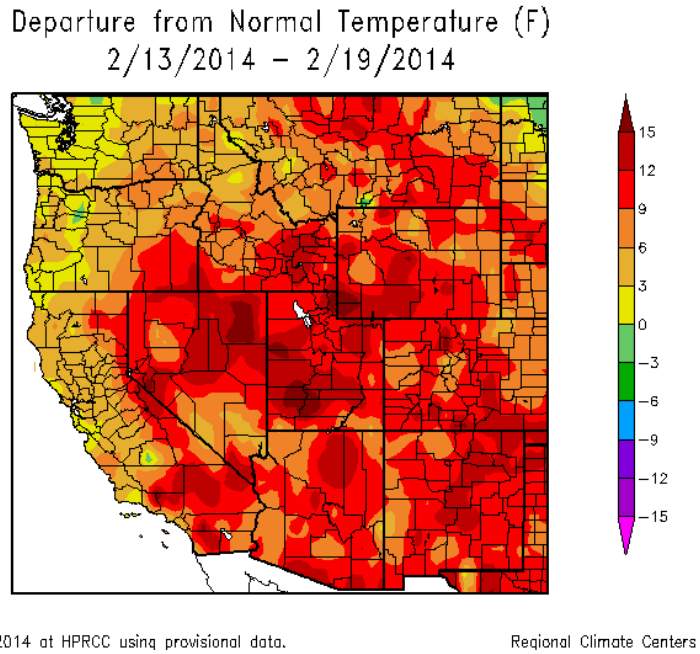


SNOTEL and ACIS 7-day temperature anomaly map (please note that this map replaces the one sent out earlier that contained some erroneous data) shows temperatures well above normal over much of the West.

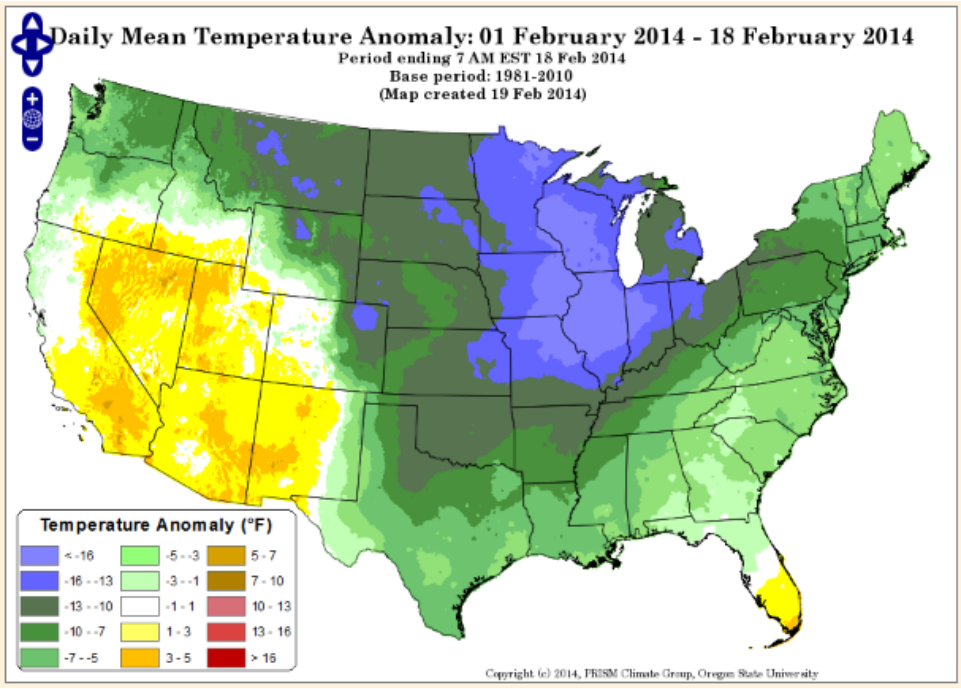
Click on most maps in this report to enlarge and see latest available update.

ACIS 7-day average temperature anomalies, ending February 19, show the greatest negative temperature departures isolated over the Cascades and northwestern-most High Plains (<-2°F). The greatest positive temperature departures occurred over northeast Nevada, southwestern Utah, and southwest Wyoming (>+15°F).

Also see Dashboard and the Westwide Drought Tracker.



This preliminary PRISM temperature map contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled.

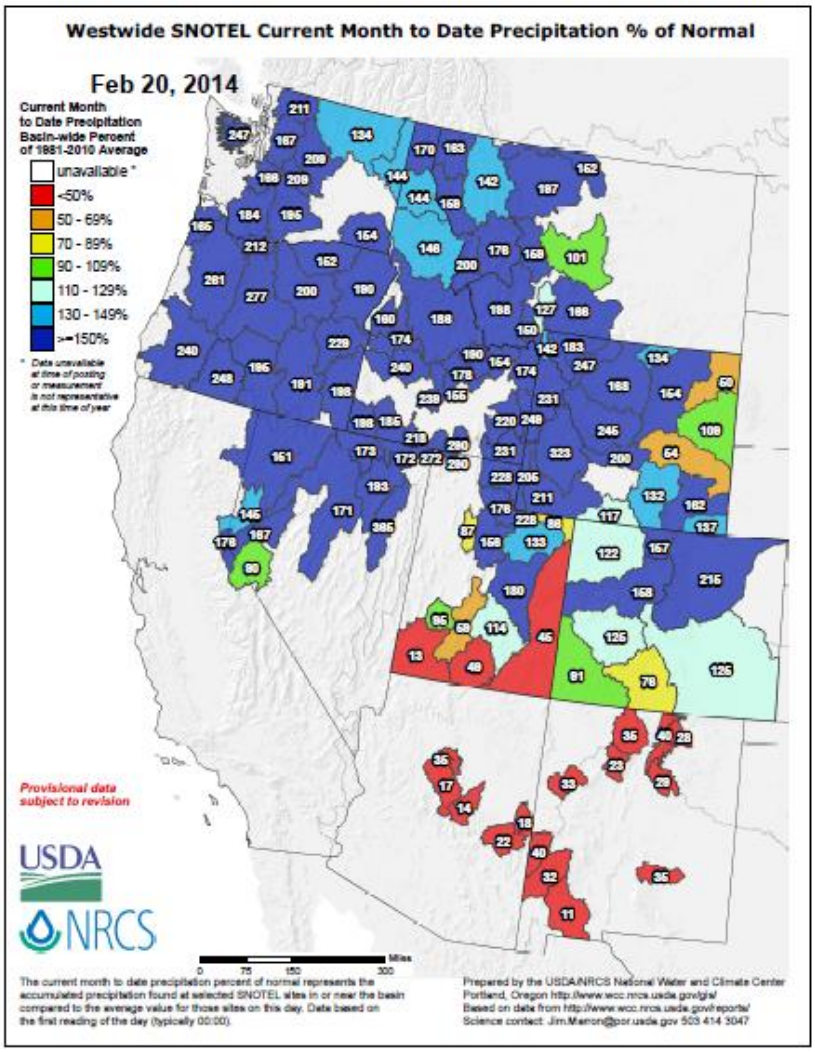


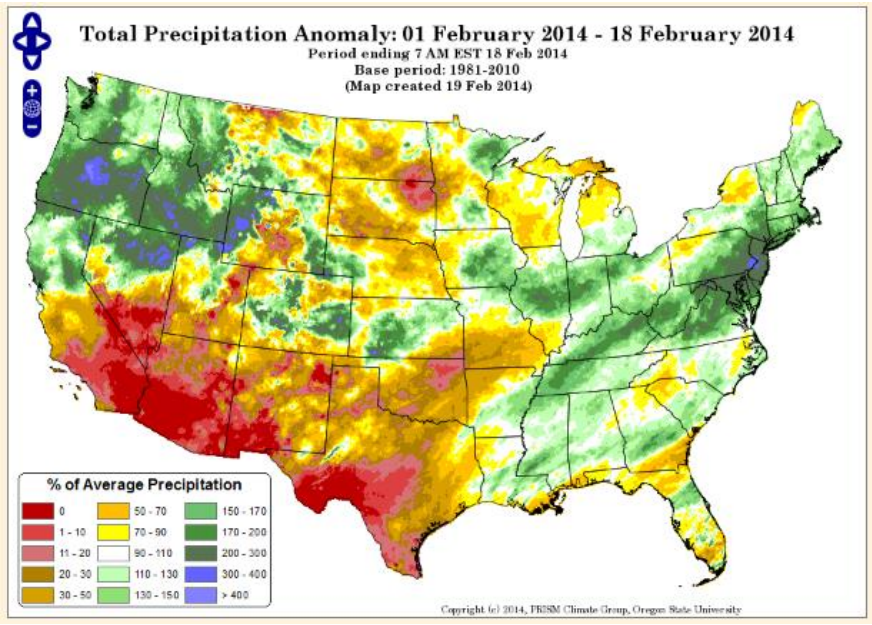
Thus far, February has been exceptionally cold over the Midwest and western Great Lakes regions (<-16°F departures). Warmer than normal temperatures have been confined to southern Florida, the Great Basin, southern California, Arizona, and New Mexico (>+5°F).

Precipitation

SNOTEL month to date precipitation percent of normal shows much of the West with well above normal values. The greatest increases this week occurred over the northern-most tier states. A few river basins in southern and eastern Utah, and all basins in Arizona and New Mexico are well below normal.

See more specifics about this event and its impact on the California drought at the end of this week's report.





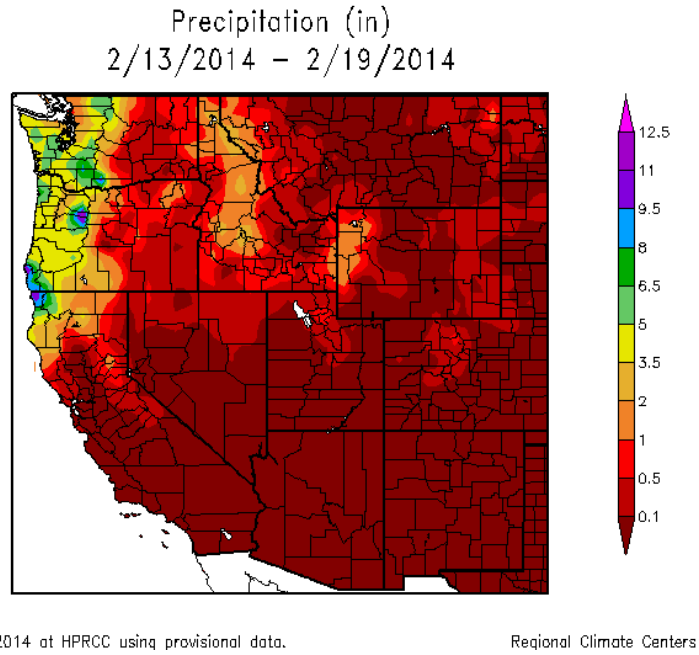
← February's precipitation pattern has been spotty across the U.S. Areas with above normal amounts have been focused over the Pacific Northwest, the interior West, Midwest, and the mid-Atlantic states. Drier conditions dominated the northern High Plains, southern California and Nevada, and the Southwest into Texas.

This preliminary daily PRISM precipitation map contains all available network data, including SNOTEL data, and is updated periodically as additional data become available and are quality controlled.

ACIS 7-day total precipitation amounts were greatest along the northern California and southern Oregon coast and over the Cascades from Mt. Hood northward (5 to 11 inches).

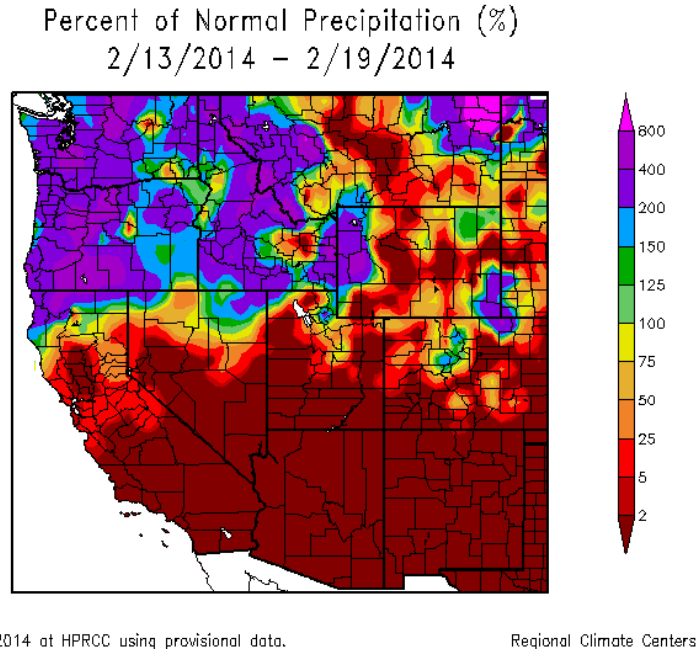
A secondary maximum area extended from northern Idaho southward and over northwestern Wyoming (1 to 3 inches).

Elsewhere, little if any precipitation fell; especially over southern California, the southern tier states, and much of central Montana

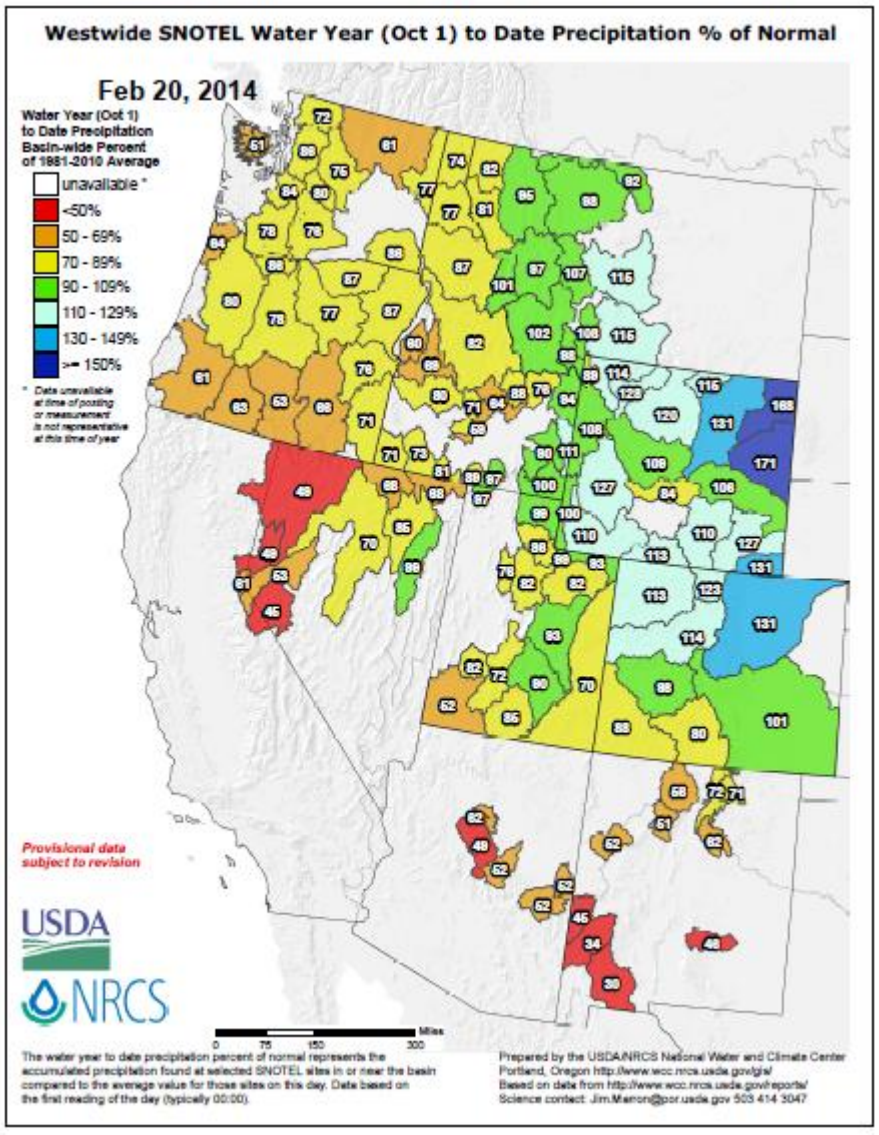


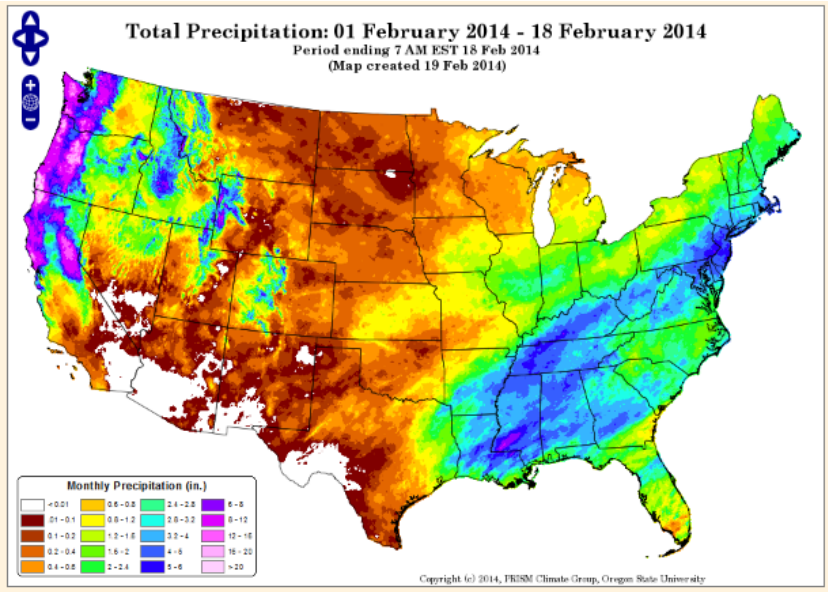
This map shows a classic La Niña pattern with abundant precipitation amounts over the northern tier states and significant deficits over the southern tier states of the West.→

Note that these ACIS maps reflect only low-elevation stations, where precipitation is typically lighter this time of year than over higher terrain. Under average conditions (based on long-term climatology), precipitation tends to increase in the coming weeks for the interior West.



For the 2014 Water Year that began on October 1, 2013, this past week saw a 1-bin category increase in most river basins over Oregon, Washington, and northwestern Montana. Some basins in Arizona saw a 1-bin category decrease.

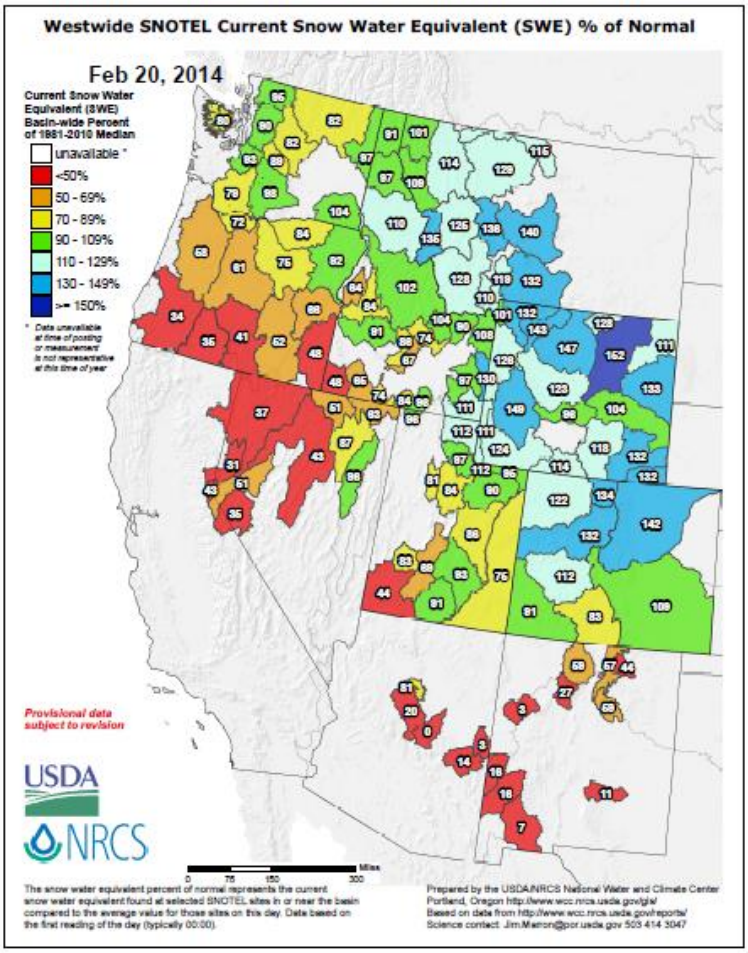




In this PRISM map, preliminary data show the **total precipitation** (rain and snow water equivalent) for thus far in February.

Typical high amounts are noted over the coastal ranges, Cascades, and Sierra, with lesser amounts over northern Idaho, northwestern Montana, western Wyoming, and central Colorado. The eastern third of the country has also seen a fair amount of moisture. Much of the Great Plains, Southwest, and southern Great Basin (including southern California) have had very low totals.

Snow



Snow Water Equivalent (SWE) values are higher east of the Continental Divide with the exception of New Mexico. **Significant improvements** occurred by 1-bin or 2-bin categories in Washington this past week. Lesser improvements occurred over northern Oregon.

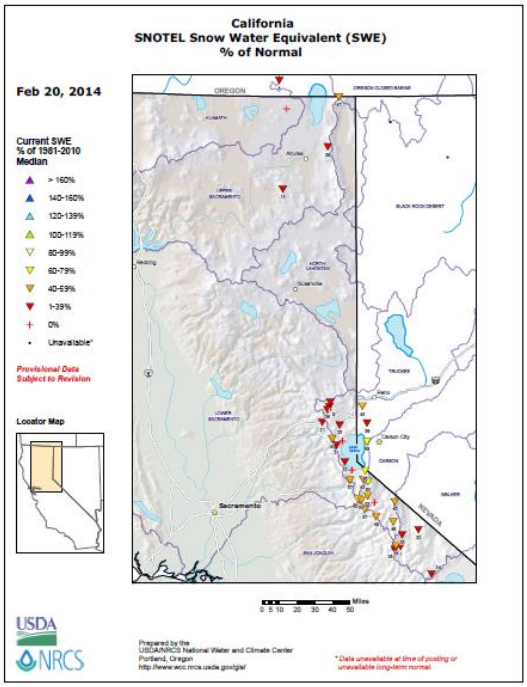
The Sierra Nevada snowpack continues in deficit and much more moisture is needed to alleviate the extreme drought conditions.

Weather models continue to suggest a surge in moisture is possible by the end of the month over northern California.

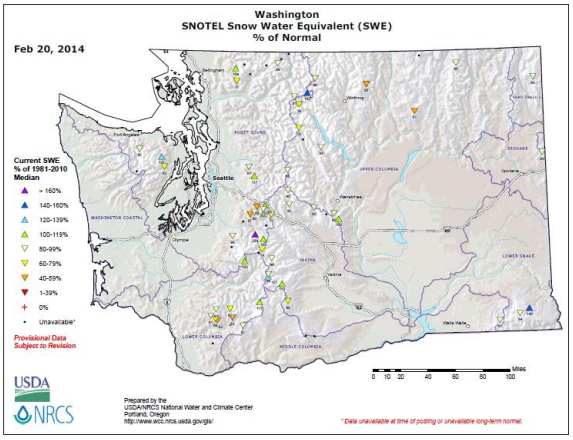
The all-important April 1 SWE date will best determine the water supply forecasts issued by the National Water and Climate Center.

See the latest National Snow Analysis

See westwide water supply forecast tables



California-Nevada SWE map by station.



Washington SWE map by station.

- Interactive map: Washington snowpack levels
- String of storms hits state; Washington snowpack builds to 80 percent of normal

← *Despite California experiencing heavy localized precipitation earlier in the month, the climate statistical probability for the state to reach its long-term average amount is about 1 in 1000 by the end of April. – NOAA*

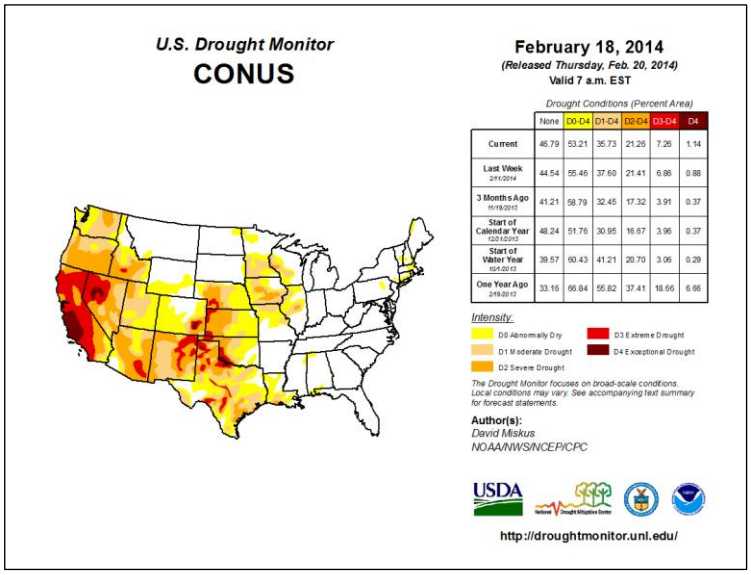
Weather and Drought Summary

National Drought Summary – February 18, 2014

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author: David Miskus, NOAA/NWS/NCEP/CPC

USDM Map Services: (contains archived maps)

D-4 Exceptional drought increased to 1.14% of CONUS.



Current Drought Monitor weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, CO, TX, and OK.

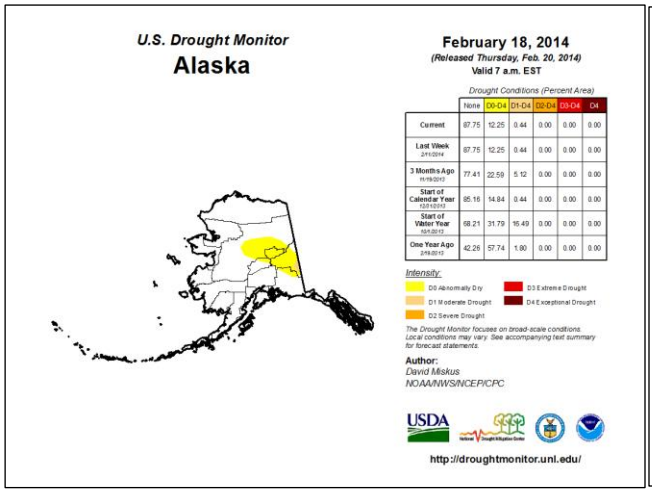
The latest drought indicator blend and component percentiles spreadsheet is a great resource for climate division drought statistics. This link is for the latest Drought Outlook (forecast). See climatological rankings.

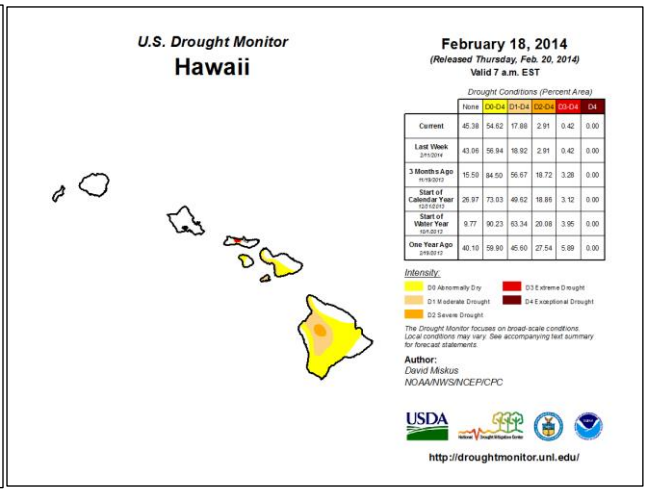
For more drought news, see Drought Impact Reporter.

Drought Management Resources (√):

- ✓ Watch AgDay TV
- ✓ **Drought Impacts Webinar Series**

See: Latest Drought Impacts during the past week.





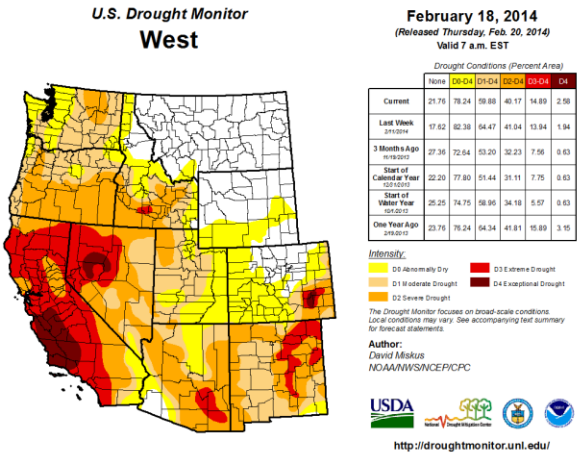
"The 49th and 50th States show benign drought conditions with the exception of the Big Island of Hawaii and leeward sides of the central island group of the state."

A comprehensive narrative describing drought conditions across other parts of the nation can be found toward the end of this document. For drought impacts definitions for the figures that follow, click here.

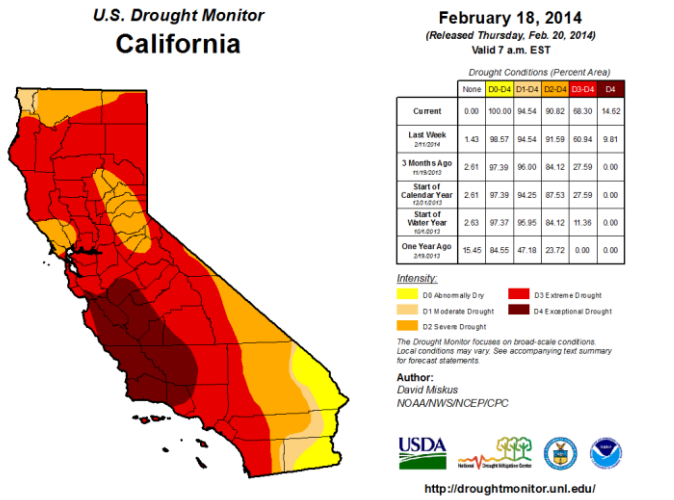
- ✓ Drought Monitor for the Western States
- ✓ Drought Impact Reporter for New Mexico
- ✓ California Data Exchange Center & Flood Management
- ✓ Intermountain West Climate Dashboard
- ✓ Great Basin Dashboard
- ✓ CLIMAS January 2014 Climate Summary

Drought News across the West

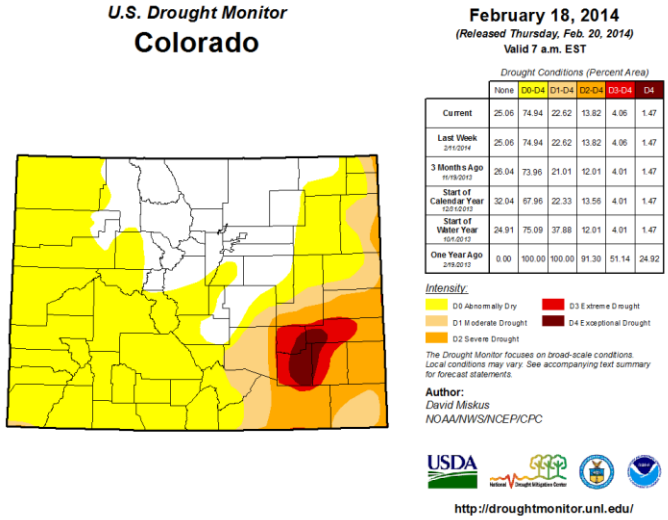
Amid drought, California and other Western states gird for a landmark year in forest fires - Feb 14, **Western U.S.**
Gov. Kitzhaber Declares Drought Emergency In 4 OR Counties - Feb 14
Irrigation shortages likely in some areas - Feb 13, **ID**
Snowstorms fail to ease grim water supply outlook - Feb 7, **NM**
State Officials Recommend Drought Preparedness - Feb 11, **NM**
Drought drives down ski business, discourages snow lovers -Feb 12, **NM**
Arizona water levels still good, despite dry winter - Feb 10, **AZ**.
Dry winter brings wildfire fears in S. Arizona - Feb 10, **AZ**



Slight deterioration in D3-D4 has occurred during the past week. - ***Click to enlarge***



Significant deterioration in D3 & D4 has occurred this week.



No changes have occurred during the past week.

Drought News from California

- California strawberry growers deal with drought - Feb 13
- California Contractors Worried About Drought - Feb 12
- Drought brings flood of business for irrigation equipment firms - Feb 11
- No water means no power for Modesto area hydroelectric producers - Feb 8.
- CAL FIRE Increases Firefighter Staffing in Central Valley - Feb 11
- El Nino forecast increases chances of ending So. California drought - Feb 11
- Northern California gets a big drink, but the state is still thirsty - Feb 10
- Calif. highway signs urge water conservation - Feb 12
- Counties to ask Gov. Kitzhaber to declare drought today - Feb 6
- DROUGHT: Water wholesaler ups efficiency rebates to $40 million - Feb 11
- Obama announces millions in California drought aid - Feb 14
- Browner medians coming as Caltrans cuts water use - Feb 11
- Thirsty growers bid sky-high for available water - Feb 5
- California Drought: Database shows big difference between water guzzlers and sippers - Feb 7

- **Photos of California drought**

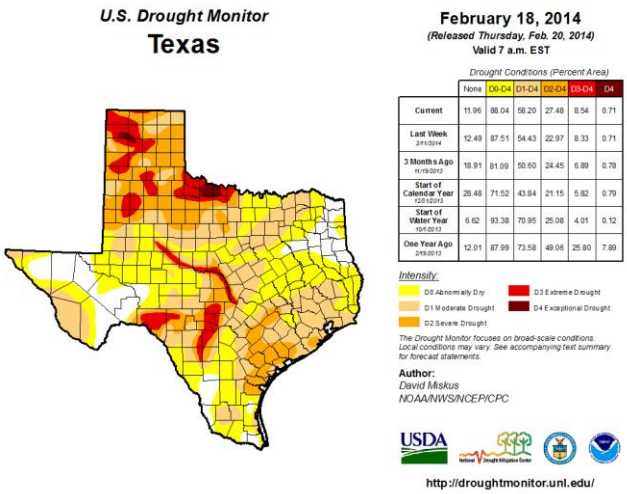
✓ **CA Drought Information Resources**
✓ **California Drought Outlook Forum**
- **Starts 9:30AM PST today (all day)**
- **Free Registration here**

State with D-4 Exceptional Drought

- ✓ Texas Drought Website.
- ✓ Texas Reservoirs.
- ✓ **Texas Drought Monitor Coordination Conference Call: on Monday's 2:00 PM - 3:00 PM CST**

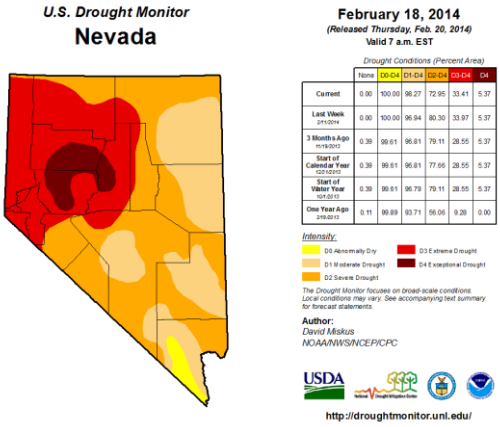
Texas Impacts during the past week

- Texans Answer Call to Conserve Water, Only to Face Paying Higher Rates - Feb 10.
- Impacts of historic drought linger in Texas - Feb 13



Deterioration has occurred in D1 and D2 during the past week.

State with D-4 Exceptional Drought



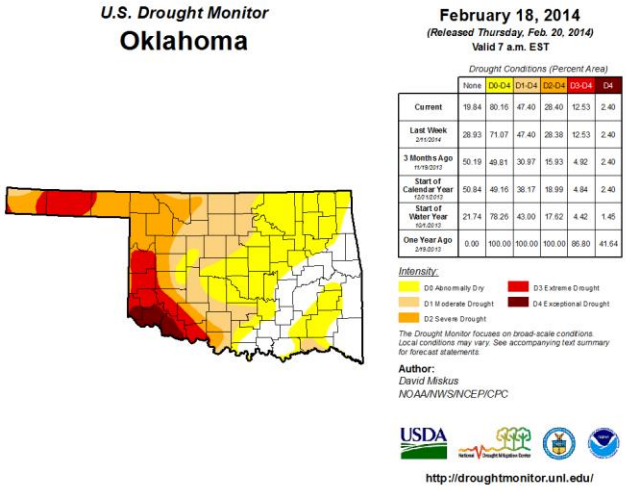
Improvement in D2 occurred during the past week.

- Sierra storm doubles snowpack, eases drought pain - Feb 11
- Drought conditions prompt earliest trout stocking in 20 years for Northern Nevada - Feb 12

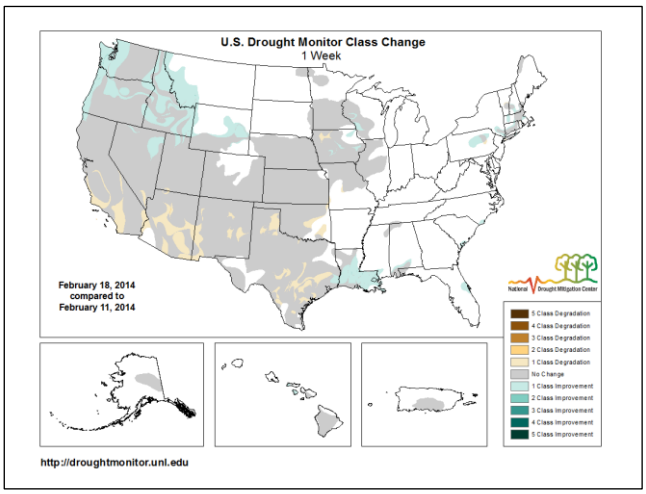
No changes have occurred during the past week

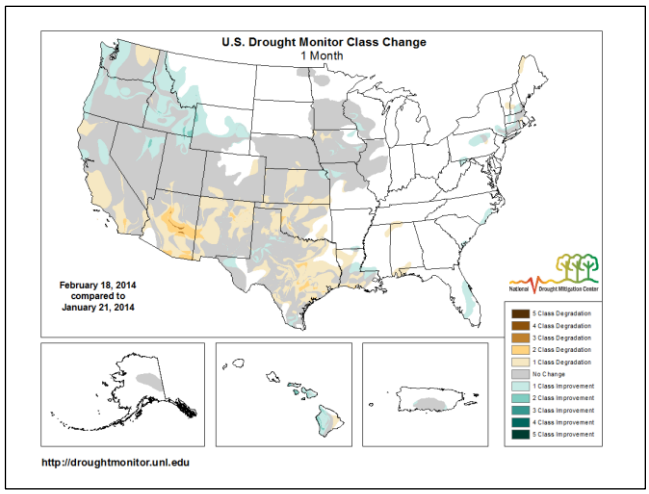
State with D-4 Exceptional Drought

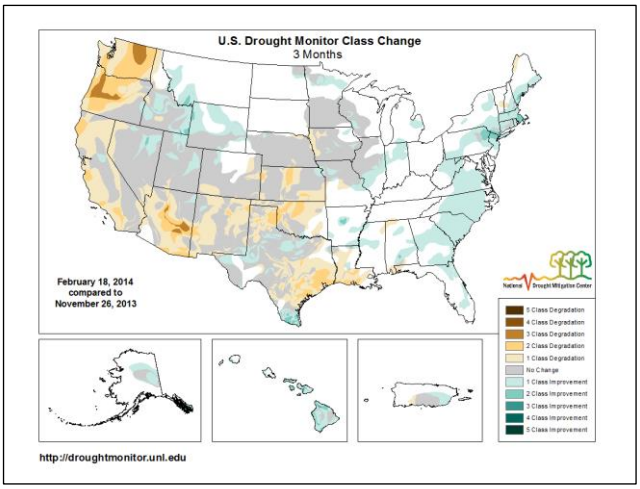
- Cold and dry January impacts Oklahoma winter grazing - Feb 10, **Oklahoma**. Winter wheat grazing in Oklahoma took a turn for the worse in January as cold, dry weather set in.

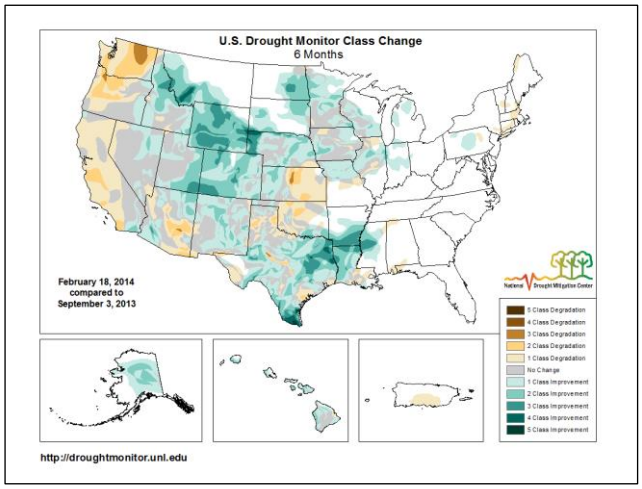


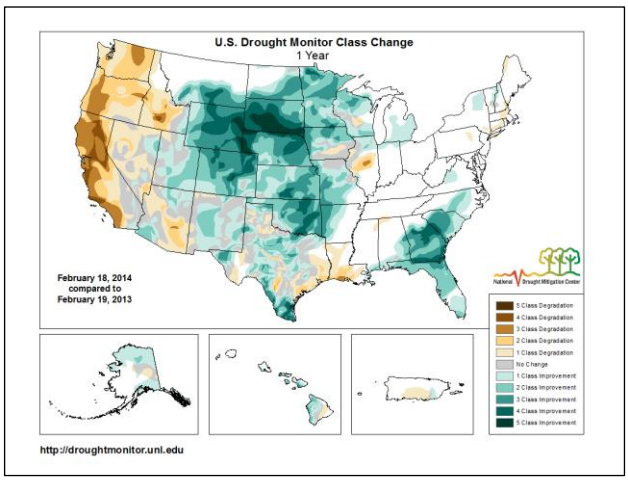
Changes in Drought Monitor Categories (over various time periods)

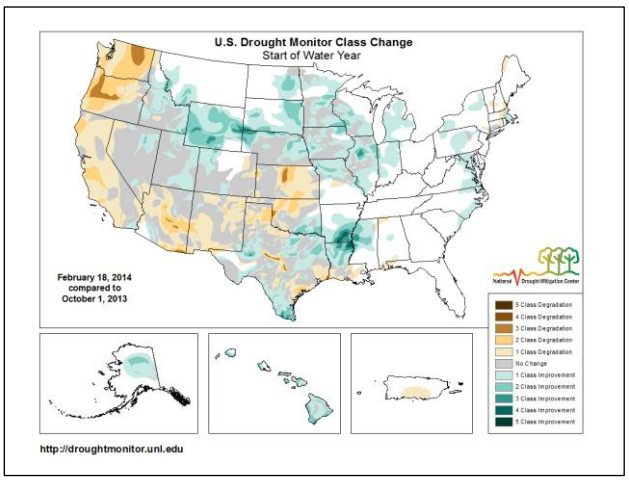






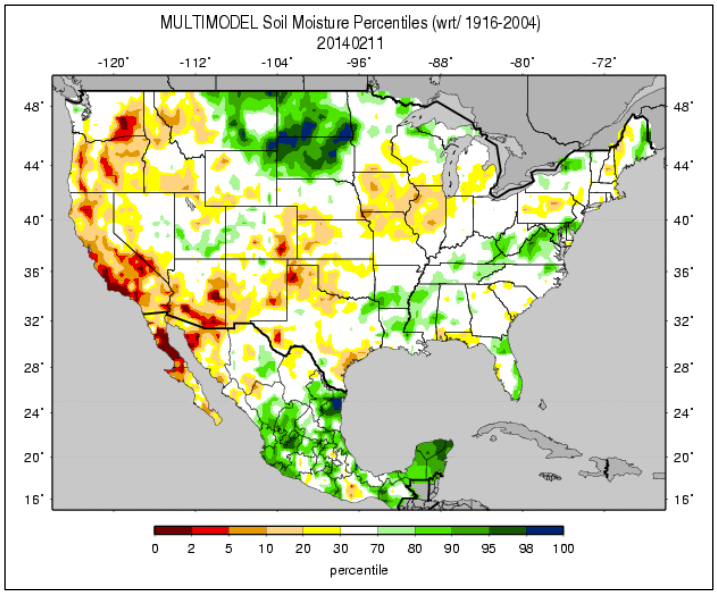






Winter time changes to the drought monitor are usually minimal. However, since the start of the 2014 water year, drought conditions have worsened over the Pacific Northwest.

Soil Moisture



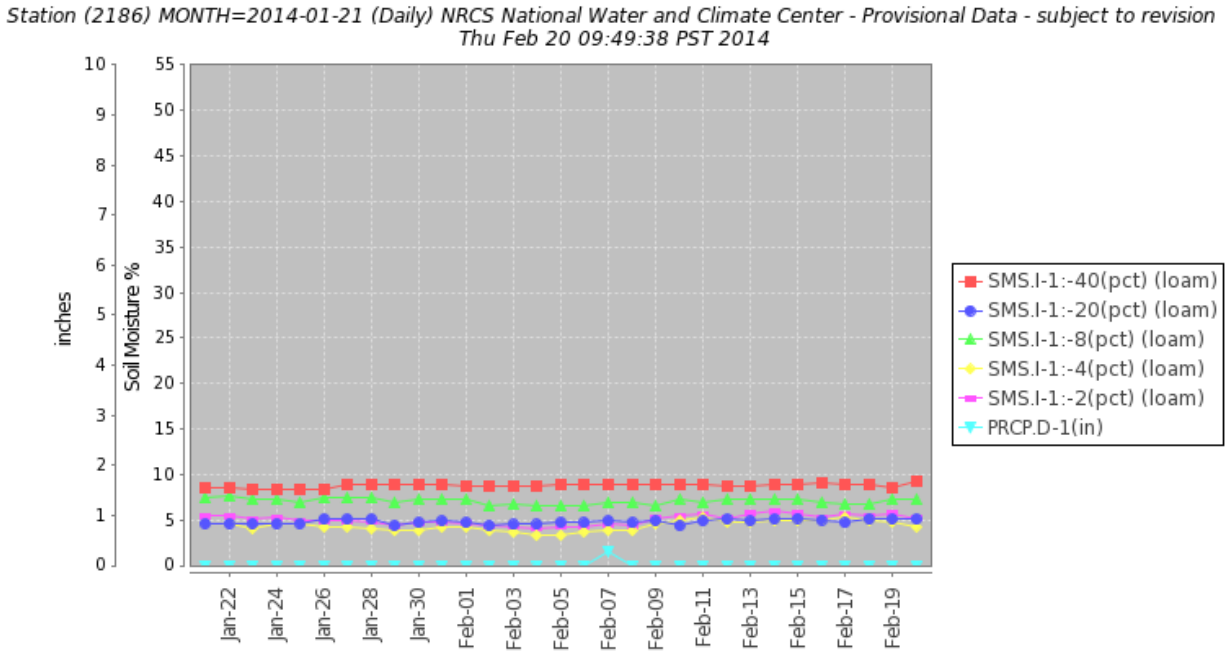
Note: With frozen ground, accuracy of measured moisture becomes suspect.

Soil moisture ranking in percentile as of February 11 shows considerable dryness over California, Arizona, parts of Oregon, Washington, and the southwestern Great Plains. Moist soils dominate the Northern Plains.

Useful Hydrological Links: Crop Moisture Index; Palmer Drought Severity Index; Standardized Precipitation Index; Surface Water Supply Index; Weekly supplemental maps, Minnesota Climate Working Group; Experimental High Resolution Drought Trigger Tool; NLDAS Drought Monitor; Soil Moisture.

Soil Health-unlock your farm's potential

Soil Climate Analysis Network (SCAN)



This NRCS resource shows soil moisture data at a SCAN site located in central-eastern California with relatively dry soils.

Useful Agriculture Links: Vegetation Drought Response Index; Evaporative Stress Index; Vegetation Health Index; NDVI Greenness Map; GRACE-Based Surface Soil Moisture; North American Soil Moisture Network. Monthly Wild Fire Forecast Report.

National Drought Summary for February 18, 2014

Prepared by: Drought Monitor Author: David Miskus, NOAA/NWS/NCEP/CPC

Summary

"During the past 7-days, the first significant storm of the wet season (since October 1) inundated parts of central California and the northern Sierra Nevada with 6-12 inches of precipitation, with locally up to 15 inches. Although there were short-term local improvements from this week's ample precipitation, the long stretch of subnormal precipitation dating back to 2011-12 wet season has accumulated large deficits, leaving rivers, lakes, reservoirs, and snow packs well below normal. Even though this storm was welcome, the central Sierra still needs 3-4 more copious storms to bring this wet season close to average. Farther north, lesser but welcome precipitation (2-4 inches) also fell on the southern Cascades, while unseasonably cold air dropped measurable snow from Portland, OR, to Seattle, WA. Unfortunately, little to no precipitation fell on southern California and the Southwest. Elsewhere, frigid conditions gripped much of the lower 48 States, with weekly temperatures averaging more than 10oF below normal from the Northwest into the Plains and Midwest. Decent precipitation from the Pacific storm also fell on parts of northern Nevada, southern Idaho, and the central Rockies. The central Plains into the Midwest saw light snow, while parts of the Southeast received 1-2 inches of rain. In the mid-Atlantic, sub-freezing air at the surface and mild air aloft generated a dangerous ice storm in parts of West Virginia, Maryland, Pennsylvania, and New Jersey. Alaska remained unseasonably mild, Hawaii saw additional showers in the northern and central islands, and eastern and western Puerto Rico reported light to moderate scattered showers.

Alaska, Hawaii, and Puerto Rico

In Alaska, little or no precipitation fell, and much of the state remained unseasonably mild except for slightly below normal readings in the southeastern Panhandle. As of February 1, snowpack remained near to above-normal in the northern, central, and eastern sections, but below-normal in the southwest, south-central, and extreme southeastern Panhandle. With above-normal snowpack, no changes were made to the D0 and D1 areas.

In Hawaii, heavy showers continued across the two western-most islands (Kauai and Oahu) where 2 to 6 inches fell. On Molokai and Maui, lighter showers (0.5 to 1.5 inches) were measured, while under 0.5 inches fell on the Big Island. Although this week was relatively dry, D0 and D1 was improved by one category along the lower Kona slopes of the Big Island where some rain gauges recorded the highest January totals since 2005, and most pastures are coming back, albeit with some sparse patches. According to the Honolulu drought information statement of Feb. 6, drought loosened its grip on Maui and the Big Island as several cold fronts during January were able to move across the island chain and reach the Big Island. The fronts brought much needed rain to the west-facing slopes and helped improve pasture an general vegetative conditions. On Molokai, the water level in Kualapuu Reservoir continued to increase slowly, but remained at less than half capacity, thus keeping the mandatory 30% reduction in irrigation water use (D3L).

In Puerto Rico, moderate to heavy showers (1-3 inches) on the western and eastern sides was enough to trim the far western and eastern edges of the D0 as short-term deficits were removed there.

Mississippi Valley

: Late-period rains fell on the lower Mississippi Valley, with heavier bands of rain (more than 2 inches) oriented from southwest to northeast occurring in central Louisiana, southern Mississippi, and central Alabama. Moderate to heavy precipitation (1.5 to 3 inches) also fell on non-drought areas of the

Tennessee and Kentucky. The heaviest rains were enough to improve drought by one category in portions of Louisiana and southwestern Mississippi, but there were still lingering deficiencies at 60- and 90-days where rainfall was less than an inch. The D2 was drawn where deficits exceeded 5 inches at both periods, while D1 represented 50-70% of normal precipitation at 90-days (4-8 inch shortages). Farther north, light to moderate snows (liquid equivalent 0.5 to 1.3 inches) across eastern Kansas and northern Missouri contributed to a 60-day surplus in this region, which was enough for some improvement in parts of Kansas and northwestern Missouri. Although light to moderate snows (liquid equivalent 0.3 to 0.7 inches) also fell on the rest of Missouri, southern Iowa, and western Illinois, 60- and 90-day precipitation has been less, producing smaller percentages of normal and larger deficits. Farther north, little or no precipitation fell on the upper Midwest, but normal are generally quite small during the winter months, and soils are frozen. Accordingly, the rest of the Mississippi Valley remained at status-quo.

New England and mid-Atlantic

A mixed bag of precipitation (rain, freezing rain, sleet, and snow) fell on the mid-Atlantic into New England, with weekly totals of 1-2 inches measured in the mid-Atlantic and coastal lower New England, and 0.5 -1 inches in interior New England. Generous and widespread precipitation during the past 3-months has generally eliminated any lingering deficiencies, although a few areas had received subnormal 90-day amounts. At 6-months, however, deficits were more widespread, including 6-month shortages of 4-8 inches in central Pennsylvania, eastern New England, and northwestern Maine. The USGS 7-, 14-, and 28-day average stream flow values were generally close to normal, with the exception of some locations in eastern Massachusetts that were below (<25th percentile) to much below (<10th percentile). Accordingly, this is where D0(L) remained on the map, while D0 removal occurred in wetter sections of western Maryland and south-central Pennsylvania.

Southeast

Most locations saw light to moderate precipitation (0.5 to 2 inches) and seasonable temperatures (within 5oF of normal), keeping conditions generally status-quo. The exceptions to this occurred in southeastern North Carolina where 1-1.5 inches of rain was enough to shave away the northern two-thirds of the D0 area; in east-central Florida where 2-3 inches of rain erased the northern edge of the D0(L) area; and along the Alabama and Mississippi border where 1-3 inches of rain cut the elongated D0(S) into two separate, smaller areas as short-term deficits were eliminated. Abnormal dryness remained where 60- and 90-day shortages still lingered.

Southern and Central Plains

With the exception of light to moderate snows from the Oklahoma Panhandle northeastward across Kansas, southern Nebraska, and into Missouri and Iowa, and light rain in eastern Texas, little or no precipitation fell on the remainder of the central and southern Plains. Fortunately, normal precipitation totals are relatively low during the winter months, so accumulating deficits were also low. In central and eastern Kansas, where snow amounts were highest (liquid equivalent 0.5 to 1 inch), enough precipitation fell to produce 60-day surpluses from south-central to northeastern Kansas, thus improving drought by one category in south-central and northeastern Kansas. Elsewhere in Kansas, Nebraska, and western Oklahoma, the amounts were lighter or 60- to 90-day shortages still existed, so status-quo was kept. In Texas and southern Oklahoma with little precipitation occurring and normals low, most sections maintained their condition. A few areas, however, did require some deterioration as short-term dryness has begun to impact long-term impacts. This included southeastern Texas (D2 expansion), east-central Texas (D0 increase), southwest Texas (D3 merged), and D3-D4 increase eastward along the Red River where USGS flows are at 7-, 14-, and 28-day record lows.

Southwest

Little or no precipitation was reported in the Southwest as several locations in this region have yet to receive any measurable precipitation during 2014. The lack of appreciable winter precipitation has accumulated short-term deficits as most locations from southern California eastward into New Mexico have measured less than 25% of normal precipitation the past 60-days. Fortunately there was a surplus of rain at 6-months in most of these eastern and western areas; however, with drier conditions at 6-months in central Arizona and near the Salton Sea of southeastern California, D1 and D2 were slightly expanded there. According to the NRCS SNOTEL sites, Feb. 12 basin average snow water content remained low in central Arizona (13-33%, one site at 91%) and New Mexico (19-40% in the west and south, 41-60% in the north).

The West

As mentioned in the opening Weekly Weather Summary, beneficial and overdue precipitation finally fell on much of the Far West, but especially on drought-stricken northern and central California. This was the first big storm of this year's wet season (Oct-Apr) for California, bringing 8-15 inches of precipitation from just north of San Francisco (Marin, Sonoma, Napa counties) and to the western slopes of the Sierra Nevada. Although the amounts were large, the long-term drought in California since the 2011-12 wet season has accumulated huge deficits and brought severe hydrological, agricultural, and ecological impacts. Nevertheless, two small areas of improvement (D3 to D2) were made in locations where the greatest precipitation fell (8-15 inches). This caused localized stream and river flooding and did fill small water storages. On a larger scale, the Folsom Reservoir on the American River was the big winner in the recent event, doubling its storage; however, it would need to double again to get back to average. Oroville Reservoir was next best, going from 1.26 MAF (million acre-feet) to 1.33 MAF, with average for this time of year 2.37 MAF. Other large California reservoirs were not as fortunate. With respect to snowpack, the latest (2/12) NRCS Snotel average basin snow water content stood at 35-54% of normal for the Sierras (CA), 29-59% for the southern Cascades (OR), and 58-69% of normal for the northern Cascades (WA). Values were generally above-normal for the Rockies, and below normal to the west. So with this brief (1-week) glimmer of good news, the bad news is that California has a long, long way to go to get back to normal. To put this in historical perspective (which does NOT include the Feb. 4-10 storm), NCDC stated that except for January 2014 (3rd driest) and June 2013-January 2014 (2nd driest), all of the time periods from the last two months (Dec'13-Jan'14) through the last twelve months (Feb'13-Jan'14) ranked driest on record statewide for California since 1895. In addition, the last 24-months (Feb'12-Jan'14) was also the driest such 24-month period on record.

Elsewhere, from coastal Oregon southward to Sonoma County, 2-8 inches were measured. The northern Cascades generally saw 1.5 to 4 inches, while the southern Cascades 2 to 6 inches. Heavy precipitation (more than 2 inches) also spilled eastward into southern Idaho, northern Nevada, western Wyoming, northern Utah, and central Colorado. However, since the previous 3 months had been relatively dry in the West, only minor improvements were made where the greatest precipitation fell. This included: northeastern Nevada where 1.5 to 3 inches of precipitation diminished the D3 there; Idaho, a slight reduction of the northern D3 area and adjacent D2 area, and D2 to D1 improvement in the southeast; western Wyoming, D0 and D1 reduction; and northeastern Utah, D1 to D0 improvement. Elsewhere, the precipitation was enough to prevent any further deterioration, except in Washington.

In Washington, both short-term ACIS and AHPS precipitation amounts have been well below normal (<50%) at 30-, 60-, and 90-days, especially in the western and northeastern sections. In light of rapidly accumulating 90-day shortages of over 20 inches along the western coast and 4-8 inches in north-central sections, D2 was expanded northward from Oregon into the Seattle-Tacoma area, and

introduced in north-central portions. D1 was also expanded eastward into northern Idaho while D0 slightly shifted into northwestern Montana.

Looking Ahead

During February 13-17, 2014, a departing Atlantic Coast storm (on Feb. 13) should drop moderate to heavy precipitation on the Northeast, while unsettled weather in the Northwest should bring heavy precipitation (4-12 inches) from the Cascades southward into northern California. Unfortunately, it appears as though the southern half of California will miss out on the precipitation. Decent precipitation should also fall on Idaho and the western parts of Montana and Wyoming. Light snows are expected for the northern Plains into the Great Lakes region and Ohio Valley. Dry weather is forecast for the southwestern quarter of the Nation. Much above-normal temperatures should envelop the western half of the U.S. while subnormal readings are expected in the northeastern quarter of the country.

For the ensuing 5-day period, February 18-22, 2014, the odds favor above-median precipitation across the northern half of the Nation, with the greatest probabilities in the Northwest and Great Lakes region. Below-median precipitation is favored across the southern third of the U.S., especially in the Southwest and Southeast. Above-median temperatures are likely east of the Rockies, while the odds for sub-median readings are probable in the Far West."

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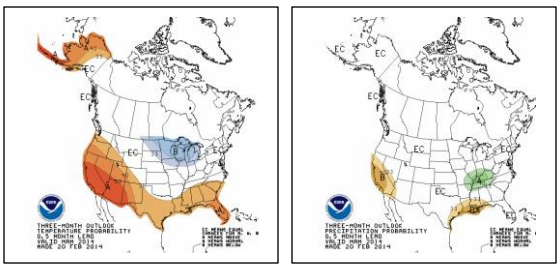
See the latest NOAA Climate Prediction Center's Seasonal Outlook



State Activities

State government drought activities can be tracked through their drought plans. NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SSWSF information. Additional information describing the tools available from the Drought Monitor can also be found at the U.S. Drought Portal.

More Information

The National Water and Climate Center (NWCC) Homepage provides the latest available snowpack and water supply information. This document is available weekly. CONUS Snowpack and Drought Reports from 2007 are available online. Reports from 2001-2006 are available on request.

This report uses data and products provided by the Interagency Drought Monitor Consortium members and the National Interagency Fire Center.

/s/
David W. Smith
Acting Deputy Chief, Soil Science and Resource Assessment

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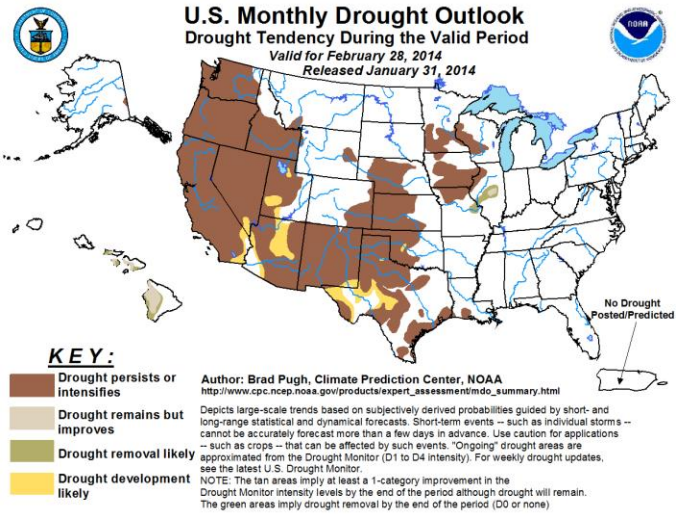
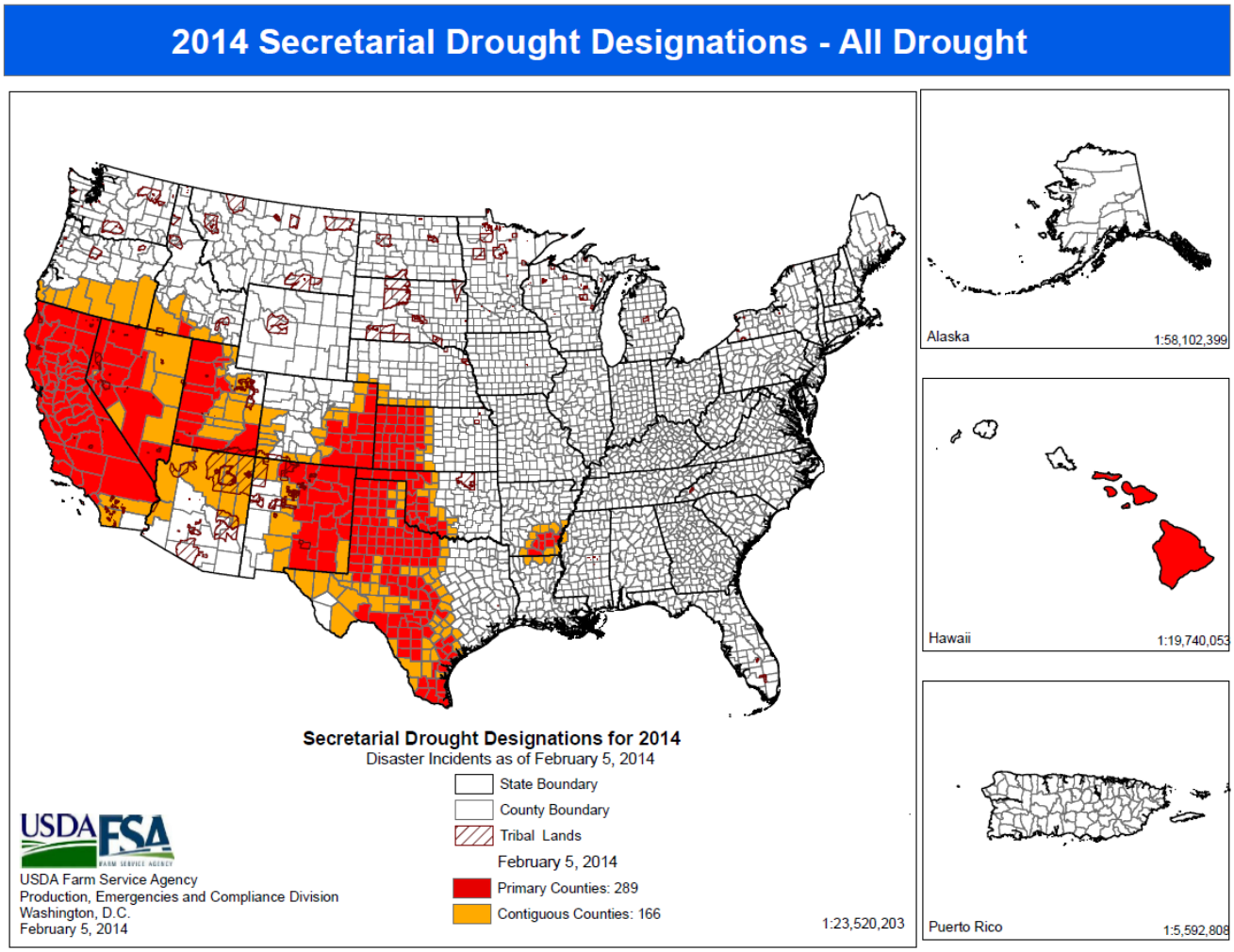
Drought Outlook



U.S. Seasonal Drought Outlook for February:

- Drought is expected to deteriorate over parts of the Southwest and southern Texas. Much of the West and south-central Plains including the upper Mississippi River Valley are expected to have persistent drought.

✓ Also see: National Significant Wildland Fire Potential Outlook (updated on the first of each month) contains a content summary of the previous month's conditions.



Refer to the USDA Drought Assistance website and National Sustainable Agriculture Information Service. Read about the new USDA Regional Climate Hubs.

Supplemental Drought News

http://www.usda.gov/oce/weather/Drought/AgInDrought.pdf
Archived "U.S. Crops in Drought" files can be downloaded at:

http://drought.unl.edu/Planning/Impacts/USAginDroughtArchive.aspx.

There were 6,107 drought-related articles for the week, which is relatively high for winter, when the weekly average is usually around 2,500 to 3,000. List compiled by Denise D. Gutzmer, Drought Impact Specialist, National Drought Mitigation Center

California
Obama Administration Announces Additional Assistance to Californians Impacted by Drought
President Obama announced financial assistance to help California get through the drought gripping the state. He offered $100 million in livestock-disaster assistance for California ranchers, $60 million for food banks to help families suffering financially due to drought, $5 million for conservation assistance in the worst-affected drought areas, $5 million for watershed protection and $3 million in emergency grants for rural communities with water shortages.

Last weekend's storm
Snowpack in the Sierra was up to 28 percent of average, which is a definite improvement from the Jan. 30 snow survey, showing 12 percent of average, but far more is needed. Parts of the northern Sierra received 2 to 5 feet of snow, while Folsom Lake rose by 17 feet.

High bids for water in Kern County, California
The Buena Vista Water Storage District in Kern County put 12,000 acre-feet of stored water up for auction to local growers. The minimum price was set at $600 per acre-foot.

The district received 50 bids, with the highest at $1,350 per acre-foot for 300 acre-feet for a total cost of $405,000. Nearly 20 of the bids offered $1,000 or more for each acre-foot, a testament to the growers' desperation. The bids altogether showed a need for more than 63,000 acre-feet of water.

Proceeds from the auction will be used to pay for a land fallowing program in the district which will compensate farmers with $400 per acre to lessen demand on the aquifer. The district hopes to fallow 4,000 to 5,000 acres with the program.

Ongoing fire season
Cal Fire hired another 15 firefighters in CAL FIRE's Madera-Mariposa-Merced Unit, 14 in the Tuolumne-Calaveras Unit, and 12 in the Fresno-Kings Unit. The previous week nearly two dozen seasonal firefighters were hired in Tulare County.

As of Feb. 11, Cal Fire had responded to more than 500 wildfires that scorched more than 1,130 acres, compared to an average of 130 small wildfires during that time.

The 2013 fire season never ended and has continued into 2014.

Water conservation
The California Department of Transportation began using 700 electronic highway boards to spread the message about drought and water conservation.

Caltrans has begun to conserve water by curbing the irrigation of highway landscaping in California and especially in severe water shortage areas, including parts of Kern, Fresno, Madera, Mariposa, Amador, Mendocino, Nevada, Placer and Santa Cruz counties, plus the cities of Healdsburg and Cloverdale in Sonoma County. Caltrans typically uses 12 to 13 billion gallons of water annually to irrigate highway vegetation and aims to pull that back to about 6 billion gallons in 2014.

The Metropolitan Water District in southern California allotted another $20 million to its previous budget of $20 million for its conservation rebate program because district officials expect a surge in demand for rebates for items such as rain barrels, lawn replacement rebates and soil moisture sensors.

Arizona wildfires
The warm, dry winter in southern Arizona has southeastern Arizona ripe for wildfires, according to national forest and parks officials. The Coronado National Forest has already seen two wildfires that charred 3.5 acres, and portends an aggressive fire season this year since forest fuels are very dry, and the forest does not usually see many winter fires.

Idaho irrigation shortages
Low reservoir storage and forecasts for low streamflow will likely lead to short irrigation supplies in the Owyhee, Salmon Falls, and Oakley basins in southwest Idaho.

Stocking fish in Nevada
The Nevada Department of Wildlife will begin stocking rivers, streams and lakes in western Nevada earlier than it has in the last 20 years before water bodies become too depleted. A supervising fisheries biologist for the Nevada Department of Wildlife said that they needed to release the fish quickly or the NDW would be left with nowhere to put the 428,000 fish that are typically released between late March and October.
Warm-water sport fish like catfish, bass and walleye are not expected to survive at Rye Patch and Lahontan reservoirs where water levels are low.

New Mexico drought outlook
With continued drought, predicted below normal mountain runoff and forecasts for a warm, dry spring, the Office of the State Engineer and New Mexico Interstate Stream Commission has recommended that residents prepare for continued drought and practice water conservation.

Oregon drought emergencies
County officials in Malheur, Harney, Lake and Klamath counties made a drought declaration and would like Gov. John Kitzhaber to also recognize their difficulties. Gov. Kitzhaber complied and declared drought emergencies in those counties.

Texas' depleted water supplies
Persistent drought in Texas has reduced the state's reservoirs to puddles because water supplies never recovered from intense drought in 2011. State officials are prioritizing use of the remaining water, seeking new water sources and hastily constructing needed infrastructure before the next intense drought arrives.

Water conservation cost the Fort Worth water utility $11 million in 2013. The reward for saving water is higher water rates. The Wichita Falls water utility lost $4.5 million in revenue in 2013.

Fifty-eight of the 93 impacts listed for California in the Drought Impact Reporter are related to water supplies and lack thereof.

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The "U.S. Crops in Drought" products are produced on a weekly basis. Archived "U.S. Crops in Drought" files may be downloaded here.

Tea Cup reservoir depictions:

- http://www.usbr.gov/uc/water/basin/ ← Upper Colorado
- http://www.usbr.gov/uc/wcao/water/basin/tc_gr.html; ← Upper Snake
- http://www.usbr.gov/pn/hydromet/burtea.html ← Upper Colorado
- http://www.usbr.gov/uc/water/basin/tc_cr.html ← Upper Colorado
- http://www.usbr.gov/pn/hydromet/select.html ← Pacific Northwest
- http://www.sevierriver.org/reservoirs/teacup-diagram-of-reservoirs/ ← Sevier River Water (UT)

Supplemental California Drought Information

USDA United States Department of Agriculture

Office of Communications
1400 Independence Ave, SW
Washington, DC 20250-1300
Voice (202) 720-4623
Email: oc.news@usda.gov
Web: http://www.usda.gov

Press Release

Press Release No. PENDING

Contact:
USDA Office of Communications
(202) 720-4623

Obama Administration Announces Additional Assistance to Californians Impacted by Drought

USDA will provide up to $100 million in livestock disaster assistance, additional $10 million for water conservation.

FRESNO, Calif., Feb. 14, 2014 – Agriculture Secretary Tom Vilsack joined President Barack Obama in Fresno, Calif., today to announce that the U.S. Department of Agriculture (USDA) will provide additional assistance to help farmers, ranchers and residents affected by severe drought in California. At President Obama's direction, USDA has made implementation of the 2014 Farm Bill livestock disaster assistance programs a top priority and plans to have the programs available for sign up by April 15, 2014.

"President Obama and I will continue to do everything within our power to support California farmers, ranchers and families living in drought-stricken areas. This assistance, coupled with other aid being made available across government, should provide some relief during this difficult time," said Vilsack. "Thanks to the newly-signed Farm Bill, we are now able to offer long-awaited livestock disaster assistance, which will provide needed stability for California livestock producers impacted by drought."

USDA has declared 54 counties in California as primary natural disaster areas due to drought. Additional USDA resources announced for California and other drought-stricken states today include:

- **$100 million in livestock disaster assistance for California producers.** The 2014 Farm Bill contains permanent livestock disaster programs including the Livestock Forage Disaster Program, which will help producers in California and other areas recover from the drought. At President Obama's direction, USDA is making implementation of the disaster programs a top priority and plans to have the programs available for sign up in 60 days. Producers will be able to sign up for the livestock disaster programs for losses not only for 2014 but for losses they experienced in 2012 and 2013. While these livestock programs took over a year to get

assistance out the door under the last Farm Bill– USDA has committed to cut that time by more than 80 percent and begin sign-up in April. California alone could potentially receive up to $100 million for 2014 losses and up to $50 million for previous years.

- **$15 million in targeted conservation assistance for the most extreme and exceptional drought areas**. This includes $5 million in additional assistance to California and $10 million for drought-impacted areas in Texas, Oklahoma, Nebraska, Colorado and New Mexico. The funding is available through the Environmental Quality Incentives Program (EQIP) administered by USDA. The assistance helps farmers and ranchers implement conservation practices that conserve scarce water resources, reduce wind erosion on drought-impacted fields and improve livestock access to water.

- **$5 million in targeted Emergency Watershed Protection (EWP) Program assistance to the most drought impacted areas of California to protect vulnerable soils.** EWP helps communities address watershed impairments due to drought and other natural occurrences. This funding will help drought-ravaged communities and private landowners address watershed impairments, such as stabilizing stream banks and replanting upland sites stripped of vegetation.

- **$60 million has been made available to food banks in the State of California to help families that may be economically impacted by the drought.** The U.S. Department of Agriculture (USDA) is providing help to food banks through The Emergency Food Assistance Program (TEFAP).

- **600 summer meal sites to be established in California's drought stricken areas.** The U.S. Department of Agriculture (USDA) is working with the California Department of Education to target efforts to expand the number of Summer Food Service Program meal sites this summer. There are expected to be close to 600 summer meal sites throughout the drought stricken areas.

- **$3 million in Emergency Water Assistance Grants for rural communities experiencing water shortages**. U.S. Department of Agriculture (USDA) is making $3 million in grants available to help rural communities that are experiencing a significant decline in the quality or quantity of drinking water due to the drought obtain or maintain water sources of sufficient quantity and quality. These funds will be provided to eligible, qualified communities by application through USDA-Rural Development's Emergency Community Water Assistance Grants (ECWAG). California state health officials have already identified 17 small community water districts in 10 counties that are at risk of running out of water in 60-120 days. This number is expected to increase if current conditions persist.

Today's announcements build on other recent USDA efforts to help farmers, ranchers, and forest landowners mitigate the impacts of drought. Last week, USDA announced $20 million in Environmental Quality Incentives Program (EQIP) funds for agricultural conservation enhancements on key agricultural lands in California. These enhancements include irrigation efficiency, cover crops, orchard pruning, and protection of grazing lands. USDA also announced $15 million in Conservation Innovation Grants (CIG) in available funding to state and local governments, Tribes, universities, businesses and agricultural producers. These grants are dedicated to stimulating the development and adoption of innovative conservation approaches and technologies, including those that will help communities adapt to drought and climate change.

USDA also announced last week the establishment of regional Climate Hubs across the country that will help farmers, ranchers and communities get the information and data they need to make informed decisions around a changing climate. One center was established at the University of California, Davis.

As USDA begins implementing disaster assistance programs, producers should record all pertinent information of natural disaster consequences, including:

- Documentation of the number and kind of livestock that have died, supplemented if possible by photographs or video records of ownership and losses;
- Dates of death supported by birth recordings or purchase receipts;
- Costs of transporting livestock to safer grounds or to move animals to new pastures;
- Feed purchases if supplies or grazing pastures are destroyed;
- Crop records, including seed and fertilizer purchases, planting and production records;
- Pictures of on-farm storage facilities that were destroyed by wind or flood waters; and
- Evidence of damaged farm land.

For more information about today's announcements, visit the USDA drought resource page at www.usda.gov/drought.